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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,476	12/18/2000	Kavitha Vallari Devara	US 000397	4016

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

EXAMINER

SHANNON, MICHAEL R

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/739,476

**Applicant(s)**

DEVARA, KAVITHA VALLARI

**Examiner**

Michael R Shannon

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/18/00, 10/11/02</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 20. Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Register et al (US Pat. No. 5,371,807), cited by examiner.

With regards to claim 1, the claimed method for classification of a program is met as follows: The claimed step of receiving transcript information associated with the

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program is met by Figure 3, reference number 24, which received input text from the application for processing. The claimed step of identifying at least one cue of a plurality of cues in the transcript information, each of the plurality of cues having associated therewith a type of program is met by the Natural Language Module 32, which recognizes key words using the domain-specific knowledge base 20 and the lexicon of keywords 52. The claimed step of correlating the at least one cue of the plurality of cues identified in the transcript information to the type of program is met by the similarity measuring module 36, which uses the "Keyword → category profiles" section 56 to map a certain keyword to a similar category. The step of classifying the program based on the correlation of the at least one cue of the plurality of cues identified in the transcript information is met by the category disambiguation module 38, which uses the category selection rule base 58 to select the appropriate category and classification for the cue which was extracted from the transcript.

With regards to claim 6, the claimed apparatus for classification of a program is met as follows: The claimed transcript information extractor for extracting transcript information associated with the program from an audio/data/video input signal is met by the Natural Language Module 32, which is used to extract keywords using the lexicon of keywords 52 from the input text data signal. The claimed cue extractor for identifying at least one cue of a plurality of cues in the transcript information, each of the plurality of cues having associated therewith a type of program is met by the Natural Language Module 32, which is, again, used to extract the keywords using the lexicon of keywords 52. The keywords having an associated type of program is met by the Intelligent

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Inferencer Module 34 and the Similarity Measuring Module 36, which both serve to associate keywords/cues with associated facts and category profiles. The claimed knowledge database for correlating the at least one cue of the plurality of cues identified in the transcript information to the type of program is met by the "Keyword → Category Profiles" system 56, which serves, within the Knowledge Base 20, to associate and correlate the extracted keywords/cues with the appropriate categories. The claimed classifier for classifying the program based on the correlation of the at least one cue of the plurality of cues identified in the transcript information is met by the category disambiguation module 38 and the category selection rule base 58, which serve to output the appropriate classification based on a set of rules and the keywords extracted from the transcript information.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Register et al (US Pat. No. 5,371,807), cited by examiner, in view of Wei et al, cited by applicant.

With regards to claim 2, Register teaches all of that which is discussed above with regards to claim 1. Register does not expressly disclose the step of receiving an audio/data/video signal which includes the transcript information. The claimed step of

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step of receiving an audio/data/video signal which includes the transcript information is met by Wei, page 1345, section 1, wherein he discloses the step of receiving an audio/video feed and extracting the transcript from the received audio/video feed. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the audio/data/video feed as taught by Wei into the text classification system taught by Register, in order to allow audio and video information to be classified in the same way that Register classifies simple text information. The overall system would have benefited from the ability to classify videos and to quickly and easily organize and retrieve video information based on automatic classification.

With regards to claim 3, Register teaches all of that which is discussed above with regards to claim 1. Register does not expressly disclose any of the steps of noting a time and comparing the time. Wei meets all of the claimed limitations of claim 3. The claimed step of noting a time of occurrence during the program of the at least one cue and a second cue is met by the trajectory being used in the text tracking method of Wei (section 2.2). Wei utilizes a "text tracking" to track text and to consider the text if it falls into an appropriate trajectory. In section 3.1, he states, "the number and average duration of the 'survived' trajectories constitute additional dimensions in the feature space." The claimed step of comparing the time of occurrence of the at least one cue and the second cue to determine a proximity of occurrence of the at least first cue and second cue is met by the same trajectory, which samples different text trackings and establishes, based on duration and number, if they should be utilized. The claimed feature of the proximity of occurrence being greater than a predetermined amount

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means that the first and second cues are ignored in connection with determining the program classification is met by the trajectory and the claimed feature of the proximity of occurrence being less than a predetermined amount means that the first and second cues are utilized in connection with determining the classification is also met by the trajectory, which uses the number and average duration to establish which text trackings are utilized for classification. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the trajectory teachings of Wei in the system of Register in order to allow for biased and slanted text analyses to be ignored, so as not to misinterpret the classification of the video program.

With regards to claim 4, Register teaches all of that which is discussed above with regards to claim 1. Register does not expressly disclose which types of program classifications can be used. He does disclose a domain-specific knowledge base, which categorizes based on information in the knowledge base, which can be video program related. The claimed classification of the program being one of a news program, talk show, sports program, panel discussions, interviews, and situational comedy is met by Wei, wherein he teaches four categories, namely news, commercial, sitcom, and soap (page 1345, paragraph 4). He also suggests that the system can be extended to recognize more categories by adding new classification rules. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the classification rules as taught by Wei in the system as taught by Register, in order to allow the domain-specific knowledge base to utilize pertinent classifications and to properly classify video information.

With regards to claim 7, Register teaches all of that which is discussed above with regards to claim 6. Register does not expressly disclose noting a time occurrence of a first and second cue during the program, a temporal database for comparing the times, or the actions to take once the times are compared. Wei meets all of the claimed limitations of claim 6. The claimed step of noting a time of occurrence during the program of the at least one cue and a second cue is met by the trajectory being used in the text tracking method of Wei (section 2.2). Wei utilizes a "text tracking" to track text and to consider the text if it falls into an appropriate trajectory. In section 3.1, he states, "the number and average duration of the 'survived' trajectories constitute additional dimensions in the feature space." The claimed temporal database used to compare the time of occurrence of the at least one cue and the second cue to determine a proximity of occurrence of the at least first cue and second cue is met by the same trajectory, which samples different text trackings and establishes, based on duration and number, if they should be utilized. The claimed feature of the proximity of occurrence being greater than a predetermined amount means that the first and second cues are ignored in connection with determining the program classification is met by the trajectory and the claimed feature of the proximity of occurrence being less than a predetermined amount means that the first and second cues are utilized in connection with determining the classification is also met by the trajectory, which uses the number and average duration to establish which text trackings are utilized for classification. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the trajectory teachings of Wei in the system of Register in order to allow for biased and



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slanted text analyses to be ignored, so as not to misinterpret the classification of the video program.

With regards to claim 8, Register teaches all of that which is discussed above with regards to claim 6. Register does not expressly disclose which types of program classifications can be used. He does disclose a domain-specific knowledge base, which categorizes based on information in the knowledge base, which can be video program related. The claimed classification of the program being one of a news program, talk show, sports program, panel discussions, interviews, and situational comedy is met by Wei, wherein he teaches four categories, namely, news, commercial, sitcom, and soap (page 1345, paragraph 4). He also suggests that the system can be extended to recognize more categories by adding new classification rules. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the classification rules as taught by Wei in the system as taught by Register, in order to allow the domain-specific knowledge base to utilize pertinent classifications and to properly classify video information.

6. Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Register et al (US Pat. No. 5,371,807), cited by examiner, in view of Liou et al (US Pat. No. 6,580,437), cited by examiner.

With regards to claim 5, Register teaches all of that which is discussed above with regards to claim 1. Register does not teach that the transcript information comprises closed-captioned text. Liou teaches that the closed-captioning text is used to

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segment and classify videos (see the Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the closed-captioning processing as taught by Liou into the system of Register, in order to allow for processing of text information based on the closed-captioning information which is already present in the program signal and therefore more accessible and standard.

With regards to claim 9, Register teaches all of that which is discussed above with regards to claim 6. Register does not teach that the transcript information comprises closed-captioned text. Liou teaches that the closed-captioning text is used to segment and classify videos (see the Abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the closed-captioning processing as taught by Liou into the system of Register, in order to allow for processing of text information based on the closed-captioning information which is already present in the program signal and therefore more accessible and standard.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wei et al disclose a system for integrating visual, audio, and text analysis for news video in order to classify a story when transcripts and closed-captioning are not available.

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Wactlar et al (US Pat. No. 5,835,667) disclose a method and apparatus for creating a searchable digital video library utilizing time-stamps and text information to classify, store, and search the library.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R Shannon whose telephone number is 703-305-6955. The examiner can normally be reached on M-F 7:30-5:00, alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 703-305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael R Shannon  
Examiner  
Art Unit 2614

Michael R Shannon  
October 5, 2004

  
JOHN MILLER  
SUPERVISORY PATENT EXAMINER  
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